



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/128,394	08/03/1998	CURT D. TUDOR	RATLP007	2723

26541 7590 10/29/2003

RITTER, LANG & KAPLAN
12930 SARATOGA AE. SUITE D1
SARATOGA, CA 95070

EXAMINER

ZHEN, LI B

ART UNIT	PAPER NUMBER
----------	--------------

2126

DATE MAILED: 10/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/128,394

Applicant(s)

TUDOR, CURT D.

Examiner

Li B. Zhen

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,009,269 to Burrows in view of U.S. Patent No. 5,940,827 to Hapner.

As to claim 1, Burrows teaches (column 3, lines 43 – 53; column 6, lines 30 – 40) determining unsynchronized access (concurrency error), receiving a request from a first thread to access the resource that is available (a thread makes a call 221 to acquire an associated lock, Fig. 2). Burrows does not teach suspending the first thread for requesting to access the resource to which unsynchronized accesses can be performed.

However, Hapner teaches (column 10, lines 23 – 50) receiving a request from a first thread to access a resource (a first thread may lock a mutex corresponding to a certain condition variable having a data structure which includes a true or false flag), suspending the first thread for requesting to access the resource (the first thread blocks on the condition flag, it temporarily stops executing and waits for the condition flag to change) to which unsynchronized accesses can be performed (the thread blocks on the condition flag and simultaneously releases the mutex), and while the first thread is suspended receiving a request from a second thread to access the resource (when a

second thread changes the condition flag, it may also broadcast a wakeup call to any threads, such as the first thread, waiting for a change in the condition).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the teaching of suspending the first thread for requesting to access a resource to which unsynchronized accesses can be performed as taught by Hapner to the invention of Burrows because this atomically block threads until a specified condition is met (column 10, lines 23 – 26).

As to claim 2, Burrows teaches (column 7, lines 10 – 15) write access.

As to claim 3, Burrows as modified teaches awakening the first thread (second thread changes the condition flag, it may also broadcast a wakeup call to any threads, such as the first thread, waiting for a change in the condition; column 10, lines 23 – 50 of Hapner).

As to claim 4, Burrows teaches (column 3, lines 10 – 17) logging (record 195, Fig. 1) unsynchronized accesses.

As to claim 5, Burrows as modified teaches the first thread is suspended for a predetermined time (thread may utilize a condition variable to assert a sleep timer, waking up in response to the sleep timer lapsing; column 10, lines 23 - 50 of Hapner).

As to claim 6, Burrows as modified teaches the event awaken (wakeup call) the first thread (second thread changes the condition flag, it may also broadcast a wakeup call to any threads, such as the first thread, waiting for a change in the condition; column 10, lines 23 – 50 of Hapner).

As to claim 7, Burrows as modified teaches the second thread (second thread) sends the event (wakeup call) that awakens the first (first thread) thread (second thread changes the condition flag, it may also broadcast a wakeup call to any threads, such as the first thread, waiting for a change in the condition; column 10, lines 23 – 50 of Hapner).

As to claim 8, Burrows teaches (column 2, lines 20 – 29) the use of memory (system 190 includes a memory, Fig. 1).

As to claim 9, this is a product claim that corresponds to method claim 1; note the rejection of claim 1 above, which also meets the product claim.

As to claim 10, all of the listed storage mediums are well-known choices to store a computer program.

As to claims 11, 12 – 16, these are the same as claims 1 – 2, 3 – 7 except the resource is recited as a memory location; note the rejection of claims 1 – 7 above, which also meets this claims. Obviously the resources would be stored at a memory location.

As to claim 17, this is a product claim that corresponds to method claim 11; note the rejection of claim 11 above, which also meets the product claim.

As to claim 18, this is the same as claim 10; note the rejection of claim 10 above, which also meets this claim.

As to claims 19, 20 – 22, these are the same as claims 11 – 13, 14 – 16; note the rejection of claims 11 – 16 above, which also meets these claims.

As to claim 23, this is a product claim that corresponds to method claim 19; note the rejection of claim 19 above, which also meets this claim.

As to claim 24, this is the same as claim 10; note the rejection of claim 10 above, which also meets this claim.

As to claim 25, this is the same as claim 19 with additional limitations. As to a second thread that writes data to the memory location, it would have been obvious that another thread can write data to the memory location since there is not mechanism for synchronizing the accesses to the memory location. As to modifying existing program, see the rejection to claims 26 – 28.

As to claim 29, this is a product claim that corresponds to method claim 25; note the rejection of claim 25 above, which also meets the product claim.

As to claims 26 – 28, this is the same as claims 20 – 22 with the addition of modifying existing program to include computer code. Burrows teaches (column 2, lines 42 – 67) modifying existing program to include computer code.

As to claim 30, this is the same as claim 10; note the rejection of claim 10 above, which also meets this claim.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (703) 305-3406. The examiner can normally be reached on Mon - Fri, 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on (703) 305-8498. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Li B. Zhen
Examiner
Art Unit 2126

lbz
October 15, 2003



**JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**